

Amendments to the Specification:

Please add the following new paragraph after paragraph 15, which starts with “FIG. 4 illustrates” and was added in an amendment in reply to the action mailed January 17, 2008:

FIG. 5 illustrates advertisements indexed within a semantic space.

Please add the following new paragraphs after paragraph 50, which starts with “FIG. 4 also” and was added in an amendment in reply to the action mailed January 17, 2008:

Meaning-based advertising may be achieved by placing or indexing ads within the semantic space. As with documents indexed into semantic space, advertisements may be indexed or placed within the semantic space according to their targeted meaning. For instance, an advertisement from a desktop and laptop computer retailer might be indexed at/near a synset for personal computer. This places the advertisement into semantic space such that it would be retrieved according to an input that has a semantic “subspace” that includes the advertisement’s location. An advertisement such as an internet banner ad can thus be accessed or retrieved not merely by keyword or category, but rather by a semantic concept that may encompass many words, equivalent words and words of related meaning.

For instance, the computer retailer in the above example would be able to place the ad into the synset corresponding to personal computers. By doing so, a search engine or mechanism that utilizes this semantic space may sell the concept of “personal computer” to the advertiser. Instead of a keyword or even multiple keywords the purchase of a concept such as “personal computer” may be much more valuable to the advertiser and the potential viewer of the ad. Input words such as “PC”, “laptop” “desktop” and “workstation” would be related closely with one another and thus fall in close proximity to one another. As a result, an input of any of these words to a search engine or filter would result in retrieval of the same banner ad. Further, depending on the radius of semantic distance used to define the sub-space from the synset “personal computer”, many other less closely associated words (meanings) may also trigger retrieval of the same advertisement. For instance, the word “hardware” in one of its meanings indicates devices that are used in a computing or communications environment. While

“hardware” is not equivalent to “personal computer,” within a semantic space, “personal computer” may be related to the synset for “hardware” as a type of “hardware” and fall close enough in semantic distance such that an input of hardware might retrieve the same advertisement as would an input of “personal computer”.

FIG. 5 illustrates advertisements indexed within a semantic space.

The semantic space 700 of FIG. 5 includes six nodes or synsets A, B, C, D, E, and F. The semantic space 700 is illustrated for convenience as a two dimensional space with connections between various nodes showing their interrelationship. An actual semantic space may be thought of as having N-dimensions, given the complex possible associations between synsets, words, subjects and meanings. In general, the further away one location in the space from another, the less related or associated the nodes are semantically. There are two advertisements, Advertisement 1 and Advertisement 2 indexed within the shown semantic sub-space at various locations. This positioning of documents such as advertisements may be made manually or by some automated process.

Several semantic sub-spaces are shown. These sub-spaces are triggered by an input of a term or meaning that equates to a synset. A user or mechanism inputting a term that is associated with the node D will generate a semantic sub-space 710. With sub-space 710 thus defined, an ad, Advertisement 1, is found immediately. Semantic sub-space 710 is a “first” semantic sub-space which is an initial guess at a given semantic radius about the node D. In this case, an advertisement was discovered contained therein without any expansions of the space. Consequently, taking the example of a search engine portal website, a user visiting that website that enters a term equivalent to the node D would trigger retrieval of Advertisement 1.

By contrast, a first semantic sub-space 720, determined by an input term associated with node F, contains no advertisements to retrieve. As a consequence, in one embodiment, the semantic radius about the node F may be increased until an ad is found. In this instance, the semantic radius about node F was increased to give an expanded sub-space 730. The semantic sub-space 730 contains Advertisement 2. Thus, subject to an expansion from the first semantic sub-space 720, a user entering in a search term associated with node F will retrieve Advertisement 2. Unlike traditional keyword advertising, input of related meanings may also

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retrieve the same Advertisement 2. For instance, an input term associated with node C would likely also retrieve Advertisement 2, since both node C and F are related or connected concepts.